DOCUMENT RESUME

ED 421 639 CE 076 889

AUTHOR	Imel, Susan
TITLE	Technology and Adult Learning: Current Perspectives. ERIC Digest No. 197.
INSTITUTION	ERIC Clearinghouse on Adult, Career, and Vocational Education, Columbus, OH.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO	EDO-CE-98-197
PUB DATE	1998-00-00
NOTE	4p.
CONTRACT	RR93002001
PUB TYPE	ERIC Publications (071) -- ERIC Digests in Full Text (073)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Adult Education; Adult Educators; *Adult Learning; Computer Uses in Education; *Delivery Systems; Educational Needs; Educational Practices; Educational Principles; *Educational Technology; Educational Trends; *Integrated Curriculum; *Teacher Role
IDENTIFIERS	ERIC Digests

ABSTRACT

When considering the role of technology in adult learning, adult educators must determine how to respond to technology and exploit it without diminishing the learning experience. Four approaches to integrating technology into adult learning are currently being used: technology as curriculum (adults not only learn content through technology but also learn about technology itself); technology as a delivery mechanism (technology becomes the means for instructional delivery); technology as a complement to instruction (technology is used to complement instruction and extend learning); and technology as an instructional tool (technology is integrated into instructional activities). How technology can be structured to capitalize on the characteristics of adult learners must be considered as well. Like any other instructional tool, technology can either serve to perpetuate poor education practice or become a means for transforming learning. Although technology can enhance adult learning for many reasons, it does not promote learning in and of itself. Part of using technology effectively is understanding what adults want in the learning environment when technology is used. Adult educators can no longer afford to ignore the educational applications of technology; however, they must ensure that the focus remains on the learning and not the technology. (Contains 11 references) (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 421 639

Technology and Adult Learning: Current Perspectives ERIC Digest No. 197

Susan Imel

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ERIC Clearinghouse on Adult, Career, and Vocational Education
Center on Education and Training for Employment
College of Education
The Ohio State University
1900 Kenny Road
Columbus, OH 43210-1090

CE 076 885

DIGEST NO. 197

1998

ERIC Clearinghouse on Adult, Career, and Vocational Education

by Susan Imel

EDO-CE-98-197

Technology and Adult Learning: Current Perspectives

Throughout the 20th century, changes in technology have had social and economic ramifications. Although each successive wave of technological innovation has created changes to which adults have had to adjust, "what perhaps differentiates earlier technological changes from today's is the current emphasis on educational applications" (Merriam and Brockett 1997, p. 113). The most pervasive of the technologies with educational applications are the Internet and World Wide Web, but other technologies can also be used to facilitate adult learning. In considering the role of technology in adult learning, adult educators are faced with a number of challenges, including how to respond to technology and how to exploit it without diminishing the learning experience (Field 1997). The purpose of this *Digest* is to review some current perspectives about technology and adult learning. It begins by describing approaches for integrating technology into adult learning and then considers how technology can be used to support and expand adult learning.

Integrating Technology into Adult Learning

Ginsburg (1998) presents a helpful way to think about integrating technology into adult learning by proposing four basic approaches: technology as curriculum, delivery mechanism, complement to instruction, and instructional tool . Each approach is summarized here, including its benefits and limitations.

Technology as Curriculum

Not only can adults learn content through technology, they can also learn about technology itself (Merriam and Brockett 1997) and develop the skills to use it competently. An example of the technology as curriculum approach is the course, "Exploring the Internet." Offered by the Georgia Center for Continuing Education, the 10-hour, noncredit evening course is designed to provide adults with the concepts and skills for using Internet applications such as e-mail and the Web (Cahoon 1998). The benefits of this approach include the opportunity to address each aspect of the technology in a clear, structured manner; little or no distraction from peripheral learning issues or goals beyond those of learning the technology; and efficiency in acquiring a discrete set of technology skills that can be applied in different settings. The major limitation of the approach is the narrow focus on the technology and the skills to use it. When technology skills are acquired in an isolated environment, they may not be easily transferred and applied by the learner in meaningful ways. In addition, if the learner lacks an opportunity for practice, the skills may deteriorate (Ginsburg 1998).

Technology as a Delivery Mechanism

A second approach for integrating technology into adult learning is to use it as means for instructional delivery. In basic skills instruction, an example of this approach is the individualized learning system (ILS). ILSs are designed to provide instruction and practice in a set of subskills that together form an entire curriculum. Other examples include televised instruction and instruction delivered through video or audiotapes. Although this approach lends itself to individualizing instruction, for the most part, the learner works in isolation from other learners and, in some instances, the teacher. Also, few, if any, technology skills are acquired. For example, ILSs require learners only to retrieve the software program, identify themselves, and employ a limited number of keystrokes. They are also costly (ibid.), a limitation that does not extend to televisions, VCRs, and audiotape players, which are more readily available.

Technology as a Complement to Instruction

In adult learning settings, technology is frequently used to complement instruction and extend learning. In adult basic education, for example, a learner might use a piece of software to practice a weak or underdeveloped skill area that has been the focus of classroom instruction (ibid). Another example of this approach is the use of Internet activities and assignments to supplement traditional distance learning (for example, telephone-supported correspondence study) (Eastmond 1998). In this approach, the instructor remains the primary coordinator of instruction and the extent to which technology is integrated with traditional instruction depends upon both the teacher's style and the kind and type of technology available. Use of technology to complement instruction extends the instruction beyond the knowledge and experiences of the teacher and can also provide opportunities for the teacher to learn. The approach also provides learners the opportunity to practice skills in private, and it can promote self-direction by allowing learners to supplement instruction in ways that meet their individual needs (Eastmond 1998; Ginsburg 1998).

A major limitation of this approach is the kind and type of material available that is suitable for adults and that promotes good adult learning practices. In the case of software, for example, teachers must take time to locate, review, and select software packages. Also, drill and practice, which does not involve the development of high-level cognitive skills such as problem solving, is the focus of many software programs. The cost of acquiring the most suitable software may also be a limitation. Finally, to avoid technology simply becoming an "add-on," teachers need to ensure that the use of technology is congruent with the primary instruction (Ginsburg 1998).

Technology as an Instructional Tool

When technology is used as an instructional tool, it is integrated into instructional activities. The primary instructional goals and outcomes remain the same, but technology is used to enrich and extend them. Although acquiring technology-related skills is not the primary focus in this approach, instructional activities frequently support their development. In completing writing assignments, for example, learners develop skills in word processing (ibid). The spread of the Internet and the World Wide Web has made this approach very common in distance education and in other education and training settings. Distance education delivered via computer conferencing is one example (Eastmond 1998). Technology has also been used to extend adult literacy curricula in a multilevel classroom by enabling learners to have immediate access to Internet-based resources that provide content of interest to their life situations and allow for teaching of skills in context (Cowles 1997). This approach allows learners to develop skills and have experiences with technology in ways that will benefit them outside the instructional setting.

When compared to the first approach, technology as curriculum, learners may more readily transfer the technology skills learned to other settings. When used as an instructional tool, the Internet provides access to information and resources that might not ordinarily be available (Ginsburg 1998). As will be discussed more fully in the next section, this approach can also be used to broaden and enhance adult learning experiences. A limitation of this approach is the willingness of instructors to adapt or develop instructional activities. In adult basic education, a shortage of curricular resources that integrate and benefit from technology exists. Access to technology for either educational providers or learners can also be a problem. Finally, an instructor's understanding and ability to use the technology may also be a limitation (ibid).

The four approaches presented here are all currently used for adult learning, and they are helpful in thinking about how to integrate technology into adult learning. How technology can be structured to capitalize on the characteristics of adult learners must be considered as well.

Supporting and Extending Adult Learning through Technology

Like any other instructional tool, technology can serve to perpetuate poor educational practice or it can become a means for transforming learning. In formal learning settings, leadership for using technology effectively rests with the instructor. However, "[technologies] are not neutral tools. Their use will reflect whatever values the educator holds—consciously or subconsciously—about her/his relationship with learners, and their use will invariably bring advantages and disadvantages" (Burge and Roberts 1993, p. 35).

Technology can enhance adult learning because it has the potential to increase flexibility, provide access to expertise, facilitate discussion among learners who cannot meet face to face, reduce feelings of isolation often experienced by nontraditional learners, increase learner autonomy, and support and promote constructivist and collaborative learning (Burge 1994; Cahoon 1998; Eastmond 1998; Field 1997). However, because "technology in and of itself does not promote learning" (Burge and Roberts 1993, p. 35), its use does not obviate the educator's responsibility for structuring the learning to ensure these benefits result.

Part of using technology effectively is understanding what adults want in the learning environment when technology is employed. Suggestions for structuring environments include the following (adapted from Burge and Carter 1997, pp. 5-6):

- Create a place where learners can collect important ideas, express themselves, and feel some security that they are going in the right direction.
- Provide fast and productive access to help when it is needed.
- Because adults generally have two basic intrinsic motivating drives of autonomy and affiliation, provide a learning environment that promotes both independent and interdependent activities with cognitive as well as psychosocial support.
- Because adults value economy of effort (i.e., they don't want to waste time), ensure that the learning tools are intuitive and essential for the immediate task.

The literature contains a number of examples of how technology is being used to promote and extend good practice in adult learning. Cowles (1997) uses the Internet to support her beliefs that skills are learned best when imbedded in context of interest to the learner and when learning is active. She has found the Internet to be a tool that can be used to individualize instruction but at the same time keep it in the context of the group and program goals. Pobega (1996) describes how he was able to use the Internet to involve students more directly in producing a student newspaper that he had edited for 5 years with the goal of developing their literacy skills. Work on the newspaper resulted in students developing writing skills, engaging with technology, and working collaboratively as an editorial team. Technology enabled Pennsylvania practitioners to overcome two issues in professional development: isolation and the effective use of practice-based professional development (Strunk and Fowler-Frey 1996). The Internet allowed 10 adult basic education practitioners engaged in action research projects to form a research community that provided not only support and encouragement but also led to critical reflection on their practice. As reported by Eastmond (1998), studies of adult learning through online instruction found that learners engaged in knowledge construction, collaborative learning, reflection, and interactivity. However, as Eastmond points out, none of "these elements are inherent in the technology but must be fostered by the course design, instructor engagement, and student behavior" (p. 37).

Conclusion

Adult educators may once have been able to ignore the educational applications of technology, but that is no longer the case. The tools that can support and advance the goals of adult learning are a part of everyday life and are used by millions of adults on a daily basis. Unless adult educators become proactive in developing opportunities that will provide advantages for adult learners, they may end up watching the exploitation of technologies from the sidelines (Field 1997). Their primary role should be to ensure that the focus is on the learning and not the technology. "The spotlight should first fall on the conditions, dynamics and outcomes of learner activity, in ways that promote learner self-esteem and their competence as proactive learners" (Burge and Roberts 1993, p. 37).

References

Burge, E. "Electronic Highway or Weaving Loom? Thinking about Conferencing Technologies for Learning." 1994. (ED 377 814)

Burge, E. J., and Carter, N. M. "It's Building, But Is It Designing? Constructing Internet-Based Learning Environments." Paper presented at the 18th World Conference of the International Council for Distance Education, University Park, PA, June 2-6, 1997. (ED 412 333)

Burge, E. J., and Roberts, J. M. ***Classrooms with a Difference: A Practical Guide to the Use of Conferencing Technologies***. Toronto: Distance Learning Office, Ontario Institute for Studies in Education, 1993. (ED 364 206)

Cahoon, B. "Teaching and Learning Internet Skills." In ***Adult Learning and the Internet***, edited by B. Cahoon, pp. 5-13. ***New Directions for Adult and Continuing Education***, no. 78. San Francisco: Jossey-Bass, 1998.

Cowles, S. K. "Technology Melts Classroom Walls." ***Focus on Basics*** 1, issue C (September 1997): 11-13.

Eastmond, D. V. "Adult Learners and Internet-Based Distance Education." In ***Adult Learning and the Internet***, edited by B. Cahoon, pp. 33-41. ***New Directions for Adult and Continuing Education***, no. 78. San Francisco: Jossey-Bass, 1998.

Field, J. "Passive or Proactive?" ***Adults Learning*** 8, no. 6 (February 1997): 160-161.

Ginsburg, L. "Integrating Technology into Adult Learning." In ***Technology, Basic Skills, and Adult Education: Getting Ready and Moving Forward, Information Series no. 372***, edited by C. Hopey, pp. 37-45. Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, Center on Education and Training for Employment, College of Education, The Ohio State University, 1998.

Merriam, S., and Brockett, R. ***The Profession and Practice of Adult Education***. San Francisco: Jossey-Bass, 1997.

Pobega, D. "The Story of *tr* LBE-ELECTRONIC: Adult Literacy Students Publish on the Net." ***Literacy Now*** 1 (September-October 1996): 6-7, 16-18. (ED 401 385)

Strunk, S. J., and Fowler-Frey, J. ***ESL Online Action Research, Final Report***. Lancaster: Pennsylvania Association for Adult Continuing Education, Lancaster-Lebanon Intermediate Unit, 1996. (ED 406 861)

Developed with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under Contract No. RR93002001. Opinions expressed do not necessarily reflect the position or policies of OERI or the Department. ***Digests*** may be freely reproduced.

CENTER ON EDUCATION AND TRAINING FOR EMPLOYMENT
COLLEGE OF EDUCATION
THE OHIO STATE UNIVERSITY
1900 Kenny Road • Columbus, Ohio 43210-1090